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FORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title

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COUNTRY	USSR (/	roscow Obl	(tra	REPORT	Э. Г	
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	Bauman			NO. PAGES	1	
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NFORMATION REPORT INFORMATION REPORT

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MOSCOW HIGHER TECHNICAL SCHOOL I/N BAUMAN

I. GENERAL

The Moscow Higher Technical School i/n Bauman (Moskovskoye Vyssheye Tekhnicheskoye Uchilishche imeni Baumana),

was the oldest technical institute in Russia, and was once known as the Higher Catherine School (Vyssheye Ekaterinoskoye Uchilishche). It was not known by any other names

it had no post box number. The institute occupied most of Bauman 2 ulitsa in the Baumanskiy rayon, Moscow. The Yauza River formed the rear boundary of the institute and this portion of the river bank was known as the Leportovskaya Naberezhnaya. The Institute was the most important one of its type in the USSR and was well known outside of the USSR as a mechanical engineering school. It was under the jurisdiction of the Ministry of Higher Education.

II. ORGANIZATION

The Institute was headed by a director with a technical and administrative director directly responsible to him. The administrative director was responsible for all administrative matters such as personnel, salaries, purchasing school equipment and supplies, repairs and new construction, and janitorial services. The technical director was responsible for the supervision of courses and professors.

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a course and its method its various depart director and in turn to the deans. The prodessor of the courses. (See There were tended) The Technology of the courses and there were tended and the courses are the tended.	or also arranged for the mod and procedures of aments were responsible the heads of the various and instructors and instructors were organizational sketch and faculties or departmental according to the modern and the according to the sportation the second and the second according to the sec	instruction. The to the technic ous courses were ors were response e responsible to a attached).	he deans cal cal cresponsible sible to the cthe heads	25X1 25X1
the institute	a course in Mara			
part of the curriculu	m.			
III.	LAYOUT, BUILDINGS AND	FACILITIES	_	
area around the two sefence with two entrance of the main building. floor of the old part each end and three st	the institute occ a brick fence, 2 to ides and rear. The fraces which led through All laboratories wer of the building which ories high in the midd The ground floor als	meters, blocker ont had an iron the garden to the located on the was two stories lie. (See	ng area of ed off the n screen the entrance ne ground es high on sketch of	5X1 25X1
where the student had	practical training	ıg.	•	25X
second floor containe	located on the side of d offices, libraries as an addition to the man 1956.	nd classrooms.	The new	25 X 1
	This portion of	of the construct	ion Was	Z3 X 1
4 stories high.	ld, but the middle bui	lding was in al lanned to build	l probabilit; l a bridge	7 25X1
IV	. HISTORY OF THE ESTA	BLISHMENT		
				25 X
the	175th anniversary of	the institute w	as celebrated	l
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-3-	
in 1955 or 1956.	
the Russian scientist Chevkovskiy was often mentioned as	
its first scientists, and that it was known as the first school in the USSR.	technical 25X1
Student body had increased a great deal after Wo and new construction of buildings and facilities was beg	
However, the increase in f	
student body was obvious. The primary function of the i not change after 1945, but a new director was assigned i	
	2) .) (
V. ADMINISTRATION	
no special courses were requir	red to be com- 25X1
pleted prior to enrollment. One only had to complete the and take the entrance examination which consisted of Rus	e tenth grade
written), mathematics (written), physics (oral) and chem	
Those who had received gold medals in their earlier stud	ies, indicating
outstanding grades received, were allowed to enter the i out taking the entrance examination. Those who had rece	
medal, indicating good grades received, had to take the	entrance examin-
ation. However, no particular grade was required in pre- in order to be accepted to take the entrance examination	
There were no restrictions for entrance and to have his or her diploma indicating graduation from the	
the institute was well known all over the USSR.	
General requirements for entrance into the institut	
that one had to be under 35 years of age to be accepted. political requirements The recomme	
another person was not required for admittance and appar	ently gave no 25X1
advantage to a atudent. any special being given to sons or daughters of graduates who had be	consideration en admitted to
the institute no preference in en	·) ~ V 1
or professors was given to these students.	
C-O-N-J-I-D-E-N-T-I-A-L	25X1

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VI. CURRICULU	M AND COURSE OF STUDY
	addition to the regular courses, a ics was obligatory for all students.
the follo	wing subjects as being the curriculum lengineer:
Higher Mathematics	Metallography
Descriptive Chemistry	Mechanical Drawing
Analytic Geometry	Details of Machinery
Integrals	Theory of Mechanics
Acoustical Physics	Hydraulics
Optical Physics	Thermal Engineering
Electrical Physics	Fundamentals of Marxism and Leninism
Electricity	Political Economy
Organic Chemistry	Organization of Production
Quantitative Chemistry	Technology of Founding
Qualitative Chemistry	Security Work Measures
Analytical Chemistry	History of Technics
Resistance of materials	Automation (added in 1953)
In addition, military subject	cts were obligatory for all students
USSR Army Reserves.i Further, the the form of projects to be complete the opportunity to run late knowledge of tools and machinery.	hes, make parts of machinery and to acquire 25X1
In addition to the time spen from 4 to 6 hours weekly	nt in class on a given subject, which was 25X1

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is, trips to factories, were required where arrangements had been made for

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Field trips, that

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students to do their practical training. group visited the Likhacheva Automobile Factory, the Krasnyy Proletariy Machine	
Manufacturing Plant, Stankolit Lathe Manufacturing Plant. all in Moscow and a locomotive manufacturing plant in Podolsk Another factory visited was the Railroad Manufacturing Plant i/n Kaganovicha in Llublino.	25 X 1
More than one course could not be studied at one time and one could repeat a course only once. Courses could not be audited at any time. The Institute did not offer night classes or courses by correspondence. The majority of the subjects were of two semesters duration, but Theory of Mechanics was offered every three semesters. All examinations were given orally and marks given ranged from the numerals 1 to 5 as follows:	
5 - superior	
14 - good	
3 - Fair or regular	
2 - not approved	
l - very bad or failure	
The minimum requirement for transfer to the next term or course was 3 or better on all subjects. The minimum requirements for a Bachelor's Degree was 6 to 7 years study course with no less than a 3 grade average. For a Master's one had to study at least two more years and write and defend a thesis.	5X1
For any of the degrees, a thesis and laboratory and field were required.	
VII. EXTRA-CURRICULAR ACTIVITIES 25X	(1
extra-curricular activities, although opportunities to engage in such were afforded to all students. Student organizations or clubs to interest the student in research work or any type laboratory work relevant to his course of study. Social activities were also part of this plan to entice students to join. These clubs were organized by the various departments and were considered as a favorable activity by the students.	25X1
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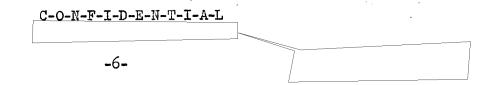
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Practical training began the first year of school. One day weekly was devoted to the training in the work shops of the institute located on its grounds. A student actually handled tools, ran lathes and made parts; worked in the school foundry and studied all machinery with which he came in contact. Beginning with the third year, students were assigned without choice to various factories to work one and two months during the summer which time was counted as school time. Students actually worked like any other worker and received a great deal of practical experience. 25X1

of the Institute and factory heads were the consultants of students in such activities.

School courses were operated in two shifts. One shift started at 0830 six days weekly and ended at 1400 hours, and the next shift started at 1400 and ended around 2000 hours. Each shift lasted from six to eight hours depending on subjects studied that day.

each shift contained 1,500 students.

IX. GRADUATES

Each year the school graduated approximately 800 students with the title of Mechanical Engineer, Master's Degrees and Doctor's Degrees.

Upon graduation, the Government had a job placement program and all graduates were obligated to accept the place and job assigned for a three year period.

students did not have a choice on their job assignments.

Job placement and number were determined by requests of the various ministries such as the Ministry of Heavy Industry, to the Ministry of Higher Education, who in turn assigned the graduate.

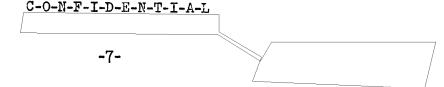
Only outstanding and promising graduates were approached and encouraged to continue in their studies or to work in research. Others in the Institute needed only to apply to other institutes or schools for a Master's Degree if they were not acceptable at the Institute Bauman. However, applicants had to take and pass the entrance examination. Graduates who were approached and remained at the institute received more stipend (800 rubles) and in addition to this, the Institute hired them to teach or assist professors for extra pay.

were also allowed to work on the outside and continue their studies.

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X. ADMINISTRATION AND PERSONNEL

The administrative staff which consisted of the Administrative Director and office staff, in addition to the responsibilities outlined above, were responsible for the teaching staff. They could hire or release instructors with approval of the Head Director and in the case of professors who were well known and had established a reputation, then the Ministry of Higher Education was consulted in the release of said professors.

Policy decisions came from the Ministry and were distributed through the Director to the Administrative Director or Technical Director and thence to department heads who in turn distribute to the teaching staff.

the following surnames of professors:

- (fnu) Acherkan Professor in General Science
- (fnu) Dobrovolskiy Professor, specialty unknown.
- (fnu) Aparin Professor taught Resistance of Materials.
- M. M. Saverin, (deceased 1953) Doctor Degree and Professor, Scientist in Mechanics.

The audit of funds was done by the bank where the money for the school was deposited.

the Ministry of Higher
Education distributed the funds. | special amounts were alloted for research purposes

Permanent teachers of foreign nationality were not employed at the Institute, but foreign books and magazines were available in great quantities.

the books and magazines come from all foreign counties,

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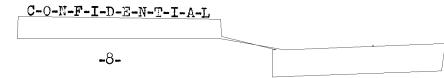
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XLL. TIME DISTRIBUTION AND SCHEDULES

The normal schedule of classes was from 0830 each morning, six days weekly to 1400 hours, and then began another shift from 1400 hours to 2000 hours. A ten day to two week vacation was given at end of the first semester examination which usually occurred in December or January and a two month summer vacation, July and August. Holidays were observed on first and second of May, seventh and eighth November, on the fifth of December and New Year's Day. Home leave was permitted to students, but time depended on the circumstances, such as death or sickness in the

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family. Students were permitted sick leaves, and time and permission was authorized by the doctor. The doctor had the authority to have a student drop a course, if necessary for the student's health. Generally students chose rest homes and sanitoriums during summer vacation to rest. The majority of the instructors also took their vacation during the summer months which was decided by the Director of the school. Graduate students took their vacation at the same time as other students.

XIII. STUDY PERIODS

Hours of study required at home to prepare for the next day's classes, depended largely on the student, but generally most students spent from 2 to 4 hours nightly. There was more reading done than writing and on the average there were about 3 hours reading to one hour of writing. This time varied with each year of advancement especially in the last year when a thesis was required, then writing and reading were about equal. The last year of study required less outside study, but graduate study, required a great deal more outside study than any time during the entire course. Summer classes as such did not exist at the Institute, but some students were required to spend one or two months of practical study in factories for which time they were compensated. Regardless every student sooner or later received his two month's vacation.

Some Russian students received special allowances depending on their grades and research work. The average cost of food ranged from 300 to 400 rubles monthly. This again depended on the student. Average cost for housing was 15 rubles monthly. There was no cost for books and materials. Materials were provided and books were obtained from the departmental or school libraries for use throughout the school years. The books were returned at the end of the school year.

There were no special fees paid by the students for laboratories, clubs, registration, filing for thesis application, special conferences or lectures nor for library.

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FACILITIES AND EQUIPMENT	
XV. LIBRARIES	
Each department or feculty of the Institute had the	
the Department of Technological Mechanics could seat 700 to 800 students. It offered up-to-date materials and reference books and magazines. Students referred to these materials to accomplish their school tasks and received text books for the entire year. There was no limit to the use of the library. There was no reference material or books available on micro-film, and no photographic materials were available fpr students' use. Certain sections of the library were dedicated to graduates, but it was also open to students. The reference material and books found here were more advanced, but not necessarily of better quality. There were no student thesis papers stored in the library. All thesis papers were kept in the office library of the respective department head, and were available to students.	25X1
able to students.	25X1
XVI. LABORATORIES	
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laboratory for the study of electronics. However, student laboratories existed for all the departments. 10 laboratories for the	25X1 25X1
Engineering Department, one for chemistry, one for physics and none for astronomy or biology. The laboratories contained all up-to-date materials and equipment, but nothing of a special nature. All equipment was available for students' use. The best equipment was found in the engineering laboratories such as the hydraulic laboratory. Equipment and material were always available, and when equipment was damaged. it was immediately repaired by the school's technicians.	25X1
To assure proper care and use of laboratory equipment, the	
laboratory assistants and professors first teach the students how to handle material and equipment. materials were available in unlimited quantities in the laboratories, and what materials were issued under strict control and in quantities needed. Graduate students were not given preference regarding use and supply of materials which were never lacking. Materials such as liquid oxygen, radioactive materials were not found in these laboratories.	25 X 1
XVILL. BUILDING FACILITIES	
the classrooms were not arge enough to accompdate the students in classes. Especially crowded were the lecture rooms. Hence the new construction from 1953 to 1956	25 X 1
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(See attached sketch of but available were kept in good		What building facilities were	
XVI		IMPRESSION AND EVALUATION DUCATION	25X1
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of its kind and also the me	lt. The Inst	students regarded their higher itute was recognized as the best in matters of course and study.	25 X 1
technical and not too theoretraining but more would have	been offered, e was not too retical	it was too scientific, but sufficiently enough practical	25X1
qualified in all aspects, a students. They were respect disposed to help each student in the scientific field demanded of the student and precise knowledge of method theories, an alert and rang approach to unfamiliar proband overcome unusual problem had prepared to step in	and were able eted by the sent individual d, the course encyclopedic is and technicating mentality olems, and a cems.	l informed in their subjects, we to get their points across to t tudents and the instructors were lly by private consultation. e, but not the examinations, knowledge of facts and date, ques, profound knowledge of y capable of taking a sound capability to successfully meet schooling immediately perform the tasks Further on-the-job training gave	25X1 25X1
confidence and experier	nce	rurther on-the-job training gave	25X1
The Ministry of Educat	ion, the cont	AND INFLUENCES trolling Ministry of the Institum of the school, the number of	te,
students permitted for acce was interested in the resul controlled the confirming o	eptance, known ts of the stu of the thesis.	n as the student plan, and alway udy program. It also, more or l	^{ess} , 25X1
Academy of Sciences over the conducted by the professors were all conferences, new s of Ministers had no direct	e Institute, was controll cientific and control over	or control was exercised by the all research led by the Academy of Sciences, academic methods. The Council the Institute but did have an many students were to be accept	25X1 as
naving its professors teach This affiliation always exi	, give talks sted with the	n other schools in the matter of in other schools and factories. e object of utilizing knowledgea lons as needed and required. The	ble
professors also acted as coassistance.	nsultants and	gave technical and scientific	^e 25X1

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or was engaged in presearch v	rojects with other establ Work was being conducted	lishments. However at the Institute	
foreign countries has affiliation or associanizations.	ad never visited the Instantians with any foreign	persons titute, and there exist n establishments or	from sed no
XX.	AWARDS, SOCIETIES, COR	WENTIONS	25X1
merit	warded the Order of Leni 175th anniversary.		r for The 25X1
would sponsor the or pation were strictly feeling of working t occasionally enjoyed the afternoons or ear but students from ot and exchanged ideas		y the interested profe- lents' interest and par- cation gave the students school problems and clous clubs usually met- ach were held at the Insils did gather there at	ssor tici- s a 25X1 in stitute,
subjects.	XXI. PUBLICATIONS		
professional personned tions to the extent of extent security restrance of publicity especial have been rare to restrature. The scientificarge and good. Approvas available to the to Soviet scientific	ications were readily averaged as were foreign scient desired. rictions hampered the Sociality through press and morad of any inventions and ric collections in local roximately 15 to 20 percepublic, and a great deal me percentage of foreign and technical publications readily available and present the second readily available and readily available and the second readily available and the secon	what viet scientific worker ence received a great of re so by radio, but it research work of a mill library collections we ent of foreign literatu h more to the student. literature which controps, and knew nothing of	in leal would itary ere 25X1
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the following outstanding publications in science and technology:

- 1. Machine Construction Herald(Vestnik Mashindstroyeniya).
 Monthly publication which dealt with aspects of
 techniques in general. It dealt with conferences,
 gatherings, methods employed in branches of industry
 and the like.
- 2. Lectures of the Academy of Sciences (Doklady Akademii Nauk). Monthly publication on thesis and conferences.
- Foundry Magazine (Liteyshchik)
 A monthly publication on foundries.
- 4. Construction Magazine (Stroitel)
 A monthly publication on construction materials and procedures.
- 5. Science and Life (Nauka i Zhizn')
 A monthly publication dealing in science in general and scientific discoveries.

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ORGANIZATIONAL CHART MOSCOW TECHNICAL SCHOOL IMENI BAUMAN Ministry of Higher Education School Director Technical Administrative Director Director for Admin purposes Deans Department Heads Professors Instructors

CONTIDENTIAL

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